

PATENT ABSTRACTS OF JAPAN

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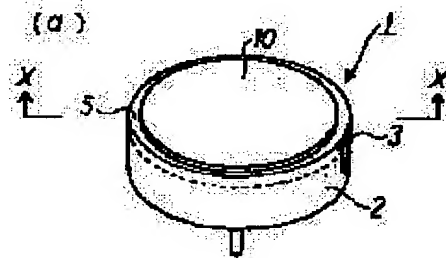
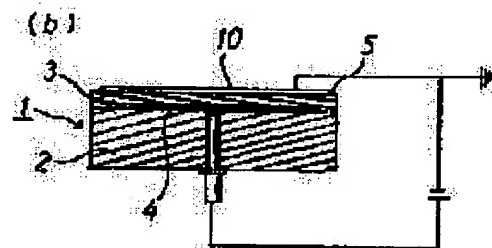
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(54) ELECTROSTATIC CHUCK

(57)Abstract:

PROBLEM TO BE SOLVED: To reduce corrosion of an electrostatic chuck and to eliminate contamination of the chuck due to particles, by a method wherein the adsorbent surface of the electrostatic chuck is formed of an aluminium nitride film containing a specified amount of titanium.

SOLUTION: An electrode 4 for adsorption is provided on the surface of a ceramic base body 2, a dielectric layer 3 is applied on the surface of the base body 2 so as to cover the electrode 4 and the upper surface of the layer 3 is used as an adsorption surface 5. The layer 3 constituting the surface 5 is constituted of an aluminium nitride film containing 1 to 8wt.% of titanium. This electrostatic chuck 1 can hold a material to be adsorbed, such as a wafer 10, by its high adsorptivity and as the width of change of the volume specific resistance value of this aluminium nitride film to a temperature change is small, the chuck 1 can be used in a wide temperature range of 300° C or lower. Moreover, the wear of the chuck, which is accompanied by abutment of the chuck with the wafer 10 and sliding of the wafer 10, or corrosion of the chuck due to a halogen or a plasma energy is suppressed and the generation of particles in the chuck can be reduced.



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